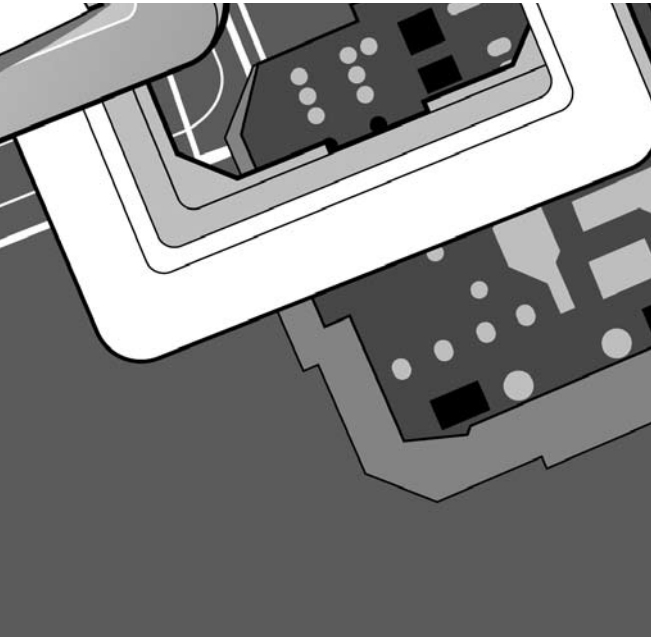
*AUS*

# *Devireg™ 535*
# *Installation and user manual*



**... your DEVI floor heating system**
Your property has been installed with a DEVI heating system. DEVI is Europe's leading floor heating manufacturer, with over 45 years experience. We are confident that you will be satisfied with your new system.

**DEVI brings you…**

**An Invisible heating solution** - A concealed heat source opens up greater opportunities for decorating and furnishing.

**Optimum comfort** - DEVI brings you the luxury and comfort of a warm floor as well as a pleasant room temperature. Floor heating is the most comfortable type of heating because it is based on the fact that warmth travels upwards; pleasant warmth for your feet, body and head.

**Low running costs** – Thanks to the precise DEVI thermostat and the placement of the heating elements right under the floor surface the heat can be controlled optimally in order for you to have the comfort you desire with minimal energy use. Moreover electric floor heating and ceiling heating is practically maintenance free, in total keeping down the running costs.

**A long lasting solution** - We back-up our floor heating solutions with a ten year guarantee on all our mats and cables, and a two year warranty on our thermostats. Practically speaking you can count on DEVI heating cables and mats lasting as long as the house in which they are installed – and that is without having to maintain them.

**Hygiene** - As DEVI produces only very gentle air circulation, the amount of travelling dust particles is reduced considerably; a great relief for people with allergies or asthma. There are also no dangerous fumes such as carbon monoxide generated by the system.

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**Placement of Devireg™ 535**

When Devireg™ 535 is used as a room sensor, installation height should typically be between 80-150 cm.

In wet rooms it should be installed on an even surface, according to local building regulations.

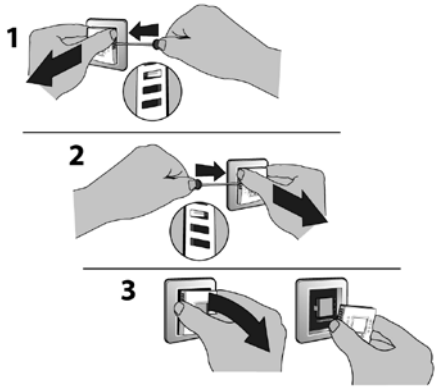
At least 50 cm away from windows/doors that will be left open occasionally.

Not on a wall where it will be subjected to direct sunlight.

Not on the inner side of a wall facing the outside.

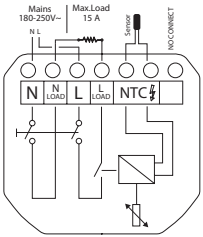
**Installation of Devireg™ 535**

1. Remove the front cover by gently pressing the release tabs on both sides of the thermostat. (Third groove from the bottom). Then remove the frame.

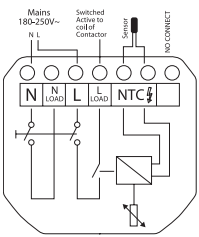



2. Connect the thermostat according to the connection diagram

a. Loads below 15 amps




b. Loads above 15 amps



3. Choose sensor combination
   When installing the Devireg™ 535 you need to choose the type of heating and thus which sensors should be used. You have three options:

   **Comfort heating:** Constant temperature on the floor in bathrooms and other rooms where a comfortable warm surface is required.
   Install the Floor sensor and choose only the Floor sensor.

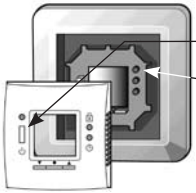
   **Total heating:** Control of room temperature in living rooms etc. Install the Floor sensor and choose both Floor sensor and Room sensor. Also recommended for ceiling heating, with the floor sensor located on top of the plasterboard, on or under the blank, unheated edge of one foil. Ensure that the sensor is not in direct contact with any part of the metallic heating element.

   **No floor sensor:** A floor sensor is not present, and cannot be installed. Choose Room sensor.

   Be aware that temperature control is less accurate without the floor sensor.

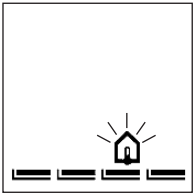
   DEVI recommends that a floor sensor is always installed.

**Do not use Devireg™ 535 without a floor sensor when the heating element is installed on or beneath wooden surfaces and other surfaces sensitive to temperature!**



**Selection of sensor type**
Power on the thermostat.

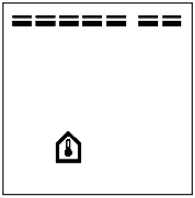
With the front off, with a small screwdriver, pencil, or needle press the installation button.



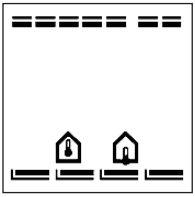
Select the sensors to be used for the heating system:

Devireg™ 535 is able to use two sensors:
- a built-in room sensor
- an external sensor to be placed in the floor.

This gives 3 options:
- floor sensor.
- room sensor.
- both room and floor sensor.



The default is
To change this setting, press ● and use the arrow buttons ΔV to select your choice. Press ● to accept your choice.



If you have selected room sensor only, the installation procedure is complete. Press installation button to accept.
(Go to page 9)

If you have selected floor sensor or a combination of room- and floor sensor press ΔV for the next setting.

**Maximum floor temperature**
When selecting either floor sensor or floor and room sensors, next screen is maximum floor temperature.

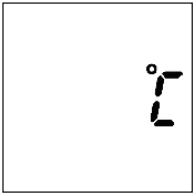
Default setting is 35°C.

To change this setting, press ● and use the arrow buttons ΔV to select your choice. Press ● to accept your choice.

If you have selected a combination of room and floor sensor, the installation procedure is complete.
Press installation button to accept.
(Go to page 9)

If you have selected floor sensor only press ΔV for the next setting.

**Notice:**
The floor temperature is measured where the sensor is placed. The temperature of the bottom of a wooden floor can be up to 10 degrees higher than the top. Floor manufactures often specify the max. temperature on the top surface of the floor. Please contact your floor supplier for maximum surface temperature. For ceiling heating, the maximum floor temperature should be set to 45°C in accordance with the plasterboard manufacturer's recommendations.



**Scale**
If you select Devireg™ 535 to only use a floor sensor, mode ⌂, you have to select the display type. The choice is either numerical scale 1-6 or Celcius scale 5° to 45°.

Default is Celcius scale. When selecting Celcius, the display will show the actual temperature at the floor sensor.

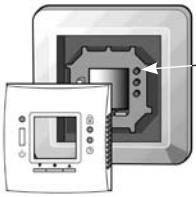
To change this setting, press ● and use the arrow buttons ΔV to select your choice.

Press ● to accept your choice.

The installation procedure is now finished.

You can use the ΔV for going back or forward through the settings.

Otherwise:



Press the installation pinhole to exit installation mode.

**4. Put the frame and front back on.**

### Devireg™ 535 Introduction

Devireg™ 535 is a simple timer temperature controller, specially designed for floor heating systems.
The Devireg™ 535 will measure the radiant comfort from the floor or ceiling combined with the comfort from the air temperature in the room to off set the outside weather condition. This means that as soon as you have set your Devireg™ 535 at your desired comfort temperature, Devireg™ 535 will then automatically adjust the heating to meet your comfort levels, regardless of changing weather conditions.
Even the programming of economy temperatures (i.e. lowering of temperature during the night and when you are out of the house) is very simple. Just tell the Devireg™ 535 when you want the comfort temperature, and the Devireg™ 535 will take care of the rest.

### Display, icons and buttons

The thermostat can be turned On / Off with the switch.

This is the standard display. The currently measured temperature is shown. 🌡 is shown to symbolize that current temperature is displayed, i.e. unit working as a thermometer.

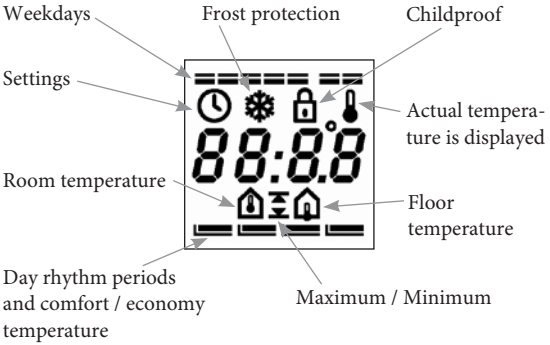
The thermostat is operated with the 3 buttons below the display.

- ▽ down
- Δ up
- ● select

Two pinhole buttons are available for dedicated features

- 🔒 Childproof. Locks all buttons.
- 🕒 Settings.

**The display indicates:**




**Increase / decrease preferred temperature.**

Use the arrow buttons ∆∇ to either increase or decrease the temperature. The temperature is changed in increments of 0.1°C.

Notice that the temperature is flashing. Whenever something is flashing you are making changes.

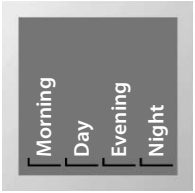
When the preferred temperature is found you can save the setting in two ways

- Press ● to accept

- Leaving it flashing for 10 seconds.

### Using the timer function

The thermostat has a built-in timer function. A status bar in the bottom of the display gives an overview of timer status.




The day is divided into 4 time periods analogous to the typical day programming pattern:

- Morning
- Day
- Evening
- Night

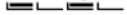
These are indicated by the ⌊‾‾ as shown in the picture to the left. The start time of each of these can be configured.

The symbol can be:

⌊‾‾ Empty: Indicating that the thermostat is in economy mode.

⌊═══ Full: Indicating that the thermostat is in comfort mode.

4 different programs can be selected

| | |
|---|---|
| **Program 1** | Manual mode. The temperature is maintained constantly 24 hours all week. |
| **Program 2**  | The temperature is lowered to economy temperature during the day and night period all week.<br>P2 is a day program for e.g. working days where the temperature is decreased during the middle of the day and at night. In the morning and evening comfort temperature is preferred. |
| **Program 3** | The temperature is lowered to economy temperature during the night period all week.<br>P3 is a program for days at home where comfort temperature is preferred during the day and a savings temperature at night. |
| **Program 4** | A week program where:<br>Mon – Fri: Program 2 and<br>Sat – Sun: Program 3<br>P4 is a week program with Monday-Friday as workdays and Saturday-Sunday as days off.<br>The top 7 bars indicate Monday through Sunday. On week days timer program 2 is used and in weekends timer program 3. |

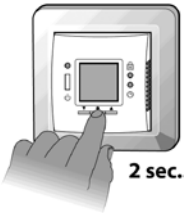
Factory setting is Program 1. Manual mode.

The factory setting of the timer is:

| | Floor sensor only | Room sensor only | Floor and Room sensor |
|---|---|---|---|
| **Temperature:** | | | |
| Comfort | 25°C | 21°C | 21°C |
| Economy | 5°C | 17°C | 17°C |
| **Periods – Day rhythm:** | | | |
| Morning | 06:00-08:00 | | |
| Day | 08:00-16:00 | | |
| Evening | 16:00-22:30 | | |
| Night | 22:30-06:00 | | |

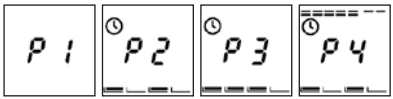
You can use the above as it is, or you can change the settings to match your day pattern.
See the chapter Settings – setting the timer periods, page 18.

### Changing timer program




To change the program:
(Remember, you need to set the time in advance, p.17)

Keep the ● button pressed for 2 seconds. The actual program starts to flash. It is now possible to change the program by using the buttons ∆∇
Press ● to accept



During the timer programs, P2, P3, and P4, the flashing ▁ indicates the actual time period.

In program 4 the actual day is also shown.

Using the arrow buttons ΔV in timer mode, is somewhat different from manual mode.

If you increase/decrease the temperature in a savings period ▁ this change only applies to this current period, not any future savings periods. You might use this if you are eg. working at home in timer program 4.

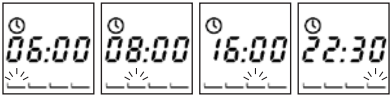
If you increase/decrease the temperature in a comfort period ▬ this change applies to all future comfort periods, until changed again. From the perspective that you are fine tuning the comfort temperature.

**Settings**

All settings are under the settings menu. Here you set the following:

- Time

- Weekday




- Timer periods configuration (Morning, day, evening and night)

- Comfort temperature

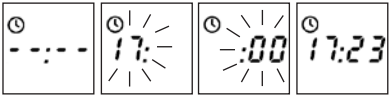
- Savings temperature

- Min. floor temperature limit (Only when combination of room and floor sensor is installed).

You enter the settings by pressing the ◷ pinhole with a small screw driver, pencil, or needle, the display now changes from temperature to time display.

By using the arrow buttons ∆∇ you move one way or the other in the menu.

**Setting the time**




By pressing the ● the hours start flashing, indicating you can change them with the arrow buttons ∆∇
Press the ● again to change the minutes.
Battery Backup: The current time and day is kept for 80 days if mains supply is off. All other settings are stored permanently. Initially mains supply the thermostat for 15 hours to fully charge the battery.

**Setting the weekday**
By pressing the ● the weekday starts flashing, indicating you can change it with the arrow buttons ∆∇
Press the ● to accept

**Setting the timer periods**

When programming the starting times of the 4 periods keep in mind that the thermostat will start heating/stop heating at the given time. Therefore some periods should start and end before, to compensate for the time it takes to heat up or down.

The first period bar ⌊‾‾ flashes indicating this is the morning period.

By pressing the ● the start time of the period starts flashing. You change it with the arrow buttons ΔV in increments of 15 minutes.

Press the ● to accept

The second period bar ⌊‾‾ flashes indicating this is the day period.

Setting it in the same way.

The third period bar ⌊‾‾ flashes indicating this is the evening period.

Setting it in the same way.

The fourth period bar ⌊‾‾ flashes indicating this is the night period.

Setting it in the same way.

**Note!** When setting the time periods you cannot step backward to the previous time period, until the last one is set. This is to ensure that the periods do not overlap.

**Setting the comfort temperature**
By pressing the ● the preset comfort temperature starts flashing.

You change it with the arrow buttons ∆∇

Press the ● to accept

**Setting the savings temperature**
By pressing the ● the preset savings temperature starts flashing. You change it with the arrow buttons ∆∇

Press the ● to accept
It can also be set to OFF.

**Setting the minimum floor temperature limit**
If the thermostat is installed as a combination of room and floor sensor the minimum comfort temperature on the floor can be selected.

Setting this will overrule any other set point as you always want e.g. 20°C at the floor sensor

--.-° means that the function is disabled.

By pressing the ● the preset minimum floor limit temperature starts flashing.

You change it with the arrow ∆∇

Press the ● to accept

**Childproof mode**

You disable all buttons in child proof mode by pressing the pinhole button below 🔒 with a small screw driver, pencil, or needle.

A lock now appears in the display and all other buttons are locked now.

To unlock press the lock symbol again

**Frost protection mode**

To set the thermostat in frost protection mode, you hold down ▽ until you reach the lowest setting. Now press ▽ again to verify that you are not just changing the comfort or economy temperature, depending on the mode or timer period the thermostat is in.

The frost icon now appears and 5.0° flashes.

You accept the mode by

- Press ● to accept

- Leaving it flashing for 10 seconds.

The thermostat is now in frost protected mode. Actual temperature is shown.

You leave frost protection mode by pressing △ (0.5sec).

**OFF mode**

To set the thermostat in OFF mode, you hold down ▽ until you reach 5.0°. Now press ▽ again **twice** to verify that you are not just changing the comfort or economy temperature, depending on the mode or timer period the thermostat is in.

The display now shows OFF.

You accept the mode by

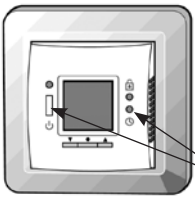
- Press ● to accept

- Leaving it flashing for 10 seconds.

OFF mode is used if you want to shut off the thermostat for a long period, but still keeping the time setting.

The thermostat is now in OFF mode. Two lines are shown in the display.

You leave OFF mode by pressing △ (0.5sec).



**Restore timer default settings**

To reset the thermostat to its timer defaults as shown on page 14, do the following:

1. Turn off the thermostat

2. While pressing the ◷ pinhole button, turn on the thermostat. The LED will now flash red/green for 1 second indicating the thermostat will reset.

**Switching displayed temperature**
Depending on what mode the thermostat is installed as (floor, or a combination of floor and room) you can change which temperature is displayed.

If installed as a floor sensor system only, you can change the displayed temperature from floor sensor temperature to room sensor temperature, if you wish to use the thermostat as a thermometer. You change the display by pressing Δ and ∇ at the same time for 2 seconds. The room sensor icon is displayed.

You press them again to return to the default display.

If installed as a combination thermostat, by pressing Δ and ∇ at the same time for 2 seconds, the temperature in the floor sensor is displayed for 2 minutes. The floor sensor icon is displayed.

## Trouble shooting

**Clock symbol flashing:**
Time settings were lost due to power cut.

The thermostat resumes to manual mode.

**E4 flashing in display:**
Error code 4 – The thermostat has overheated and has switched off
Let the thermostat cool for period. Then switch the thermostat off and on. If the error persists contact your electrician.

**E5 or E6 flashing in display:**
Error code 5 - Floor sensor short circuited

Error code 6 - Floor sensor disconnected
Call your electrician.
Check connections, if they are OK, then disconnect the 2 sensor wires and connect an ohm meter to sensor wires. Measure the ohm value and check with the values in the table in Technical Specifications below.

**Light Indications (LED)**
The Devireg™ 535 has a LED above the 2 pole safety switch. The LED has five indications:

| | |
|---|---|
| No light | The system is turned off. |
| Green light | System is standing by, set point temperature reached |
| Green light flashing | Floor sensor is defect |
| Red light | System is heating |
| Switching between red and green light | The floor temperature limit prevents the set point room temperature from being reached. |

| | |
|---|---|
| Operation voltage | 180-250 VAC, 50/60 Hz |
| Standby power consumption | Max. 0.30W |
| Relay:<br>• Resistive load<br>• Inductive load | <br>230V ~ 15A / 3450W<br>cos φ= 0.3 Max. 4A |
| Sensing unit | NTC 15 kOhm at 25°C |
| Sensing values:<br>• 0°C<br>• 20°C<br>• 50°C | <br>42 kOhm<br>18 kOhm<br>6 kOhm |
| Hysteresis | ± 0.2°C with room sensor,<br>± 0.4°C with floor sensor only |
| Ambient temperature | -10° to +30°C |
| Frost protection | 5°C |
| Temperature range | 5-35°C with room sensor,<br>5-45°C with floor sensor only.<br>Floor max. 20-50°C.<br>Floor min. 10-45°C only when installed with room and floor sensor combination |
| Sensor failure monitoring | The thermostat has a built-in monitoring circuit, which will switch off the heating if the sensor is disconnected or short-circuited |
| IP class | 31 |
| **Dimensions:**<br>• **Australian plate**<br>• **Euro plate** | <br>118mm x 79mm<br>85mm x 85mm |

**Disposal Instruction**

Equipment containing electrical components shall not be disposed together with domestic waste.
It must be collected separately with other electrical and electronic waste according to local legislation.

# The DEVI™ Guarantee

You have purchased a DEVI heating system which we are sure will serve to improve the comfort and economy of your home.

DEVI provides a complete heating solution with deviflex™ heating cables or devimat™ heating mats, Devireg™ thermostats and devifast™ fixing strips. Should you, against all expectations, experience a problem with your DEVI heating system, you will find that DEVI, whose products are manufactured in Denmark and sold throughout the European Union, is subject to the standard regulations pertaining to product liability as specified in EU directive 85/374/CEE as well as all applicable legislation in the individual countries on the following conditions: DEVI offers a 10-year Warranty on all deviflex™ heating cables and devimat™ heating mats, and a 2-year Warranty against material defects and production defects in connection with any other DEVI products.

The guarantee shall be valid only if the WARRANTY CERTIFICATE is completed correctly and in accordance with the instructions, and provided the fault is inspected by or submitted to DEVI or an authorised DEVI dealer. Please note that the WARRANTY CERTIFICATE must be completed in English or local language.

DEVI shall undertake any repair free of charge or supply the customer with a new unit. Repairs shall be carried out at no further cost to the customer. In the case of faulty Devireg™ thermostats, DEVI reserves the right to repair the unit free of charge and without any unreasonable delays for the customer.

The DEVI Warranty shall not cover installations that have been carried out by non-authorised electricians, faults which arise as a result of misuse by other suppliers, damage caused by third parties, incorrect installations or consequential damage. All

work will be invoiced in full if DEVI is required to inspect or repair faults that have arisen as a result of any of the above.

The DEVI Warranty shall not extend to equipment which has not been paid in full. DEVI will, at all times, provide a rapid, effective and honest response to all queries and reasonable demands from our customers. The above Warranty covers product liability only, while purchases are subject to national legislation.

# Guarantee Certificate

## The DEVI™ Guarantee is granted to:

Name:

Address:

Postal code: Phone:

Please observe!

In order to obtain the DEVI™ Guarantee, the following must be carefully filled in. See other conditions on previous page.

Electrical Installation by: Installation date:

Type of thermostat: Production code:

Suppliers Stamp:

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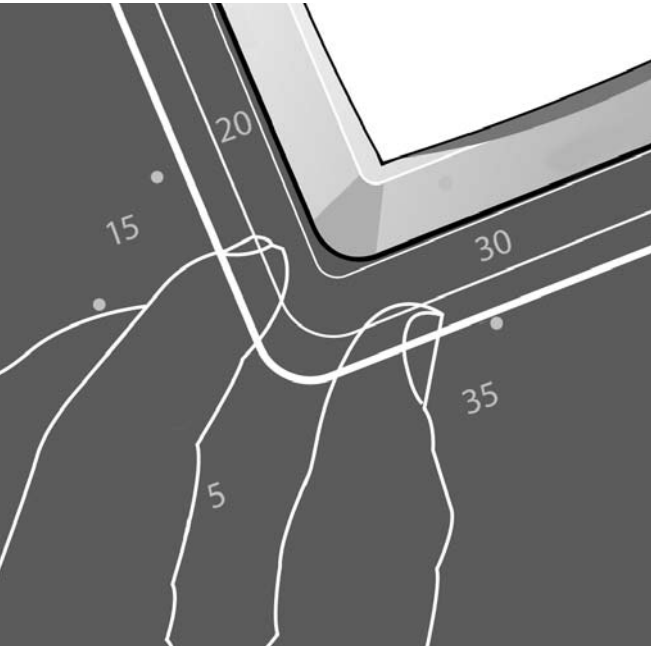
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